

Atty. Docket No. 2001-0093-01
USSN 09/896,689

Amendments to the Specification:

None

Amendments to the Claims:

Please cancel claim 10.

Please amend the claims as shown in the listing of claims which will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended): A system for controlling the physical behavior of an apparatus, the behavior of the apparatus estimated by an initial behavioral model, the system comprising:

a sensor element located in proximity to ~~on~~ the apparatus for acquiring data that accurately characterizes the physical behavior of a machine component indicative of the physical behavior of the apparatus, the data measuring occurring during an abnormal period triggered by an event, the acquired measured data being indicative of the behavior of the machine component when in normal use;

a system processor which includes a tunable controller based on the initial behavioral model, the processor capable of generating a drive signal, estimating a behavioral model, tuning and adjusting the controller and generating a control signal,

wherein the processor adapts the initial model to an updated model based upon a respective transfer function of the respective acquired data, combines the updated model with a universal filter to create a relation that describes the behavior of the apparatus and creates a controller based on the relation such that the controller is tuned according to the updated model, and

wherein the control signal generated by the processor according to the controller is used to control the physical behavior of the apparatus.